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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/726,338

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EXAMINER

PHAM, MICHAEL

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/726,338</p>	<p>Applicant(s) ZAMAN ET AL.</p>	
	<p>Examiner MICHAEL PHAM</p>	<p>Art Unit 2167</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 October 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: none.
- Claim(s) objected to: none.
- Claim(s) rejected: 3-22 and 31.
- Claim(s) withdrawn from consideration: none.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/M. P./
Examiner, Art Unit 2167

/Luke S. Wassum/
Primary Examiner
Art Unit 2167

Status of Claims:

Claims 3-22 and 31 are pending.

Claims 3-22 and 31 are unamended since final action.

Continuation of 11. does NOT place the application in condition for allowance because:

Response to Arguments

Applicant's arguments filed 10/20/08 have been fully considered but they are not persuasive. Applicant's assert mainly assert the following in regards to the cited references.

A. page 13-14, That Greenfield does not disclose "using the relational-to-multidimensional mapping together with relational/multidimensional equivalency logic to construct a multidimensional database query based on the received relational database query" because to construct a multidimensional database query is not disclosed. Applicant's assert that SQL query of OLAP objects is directed to a relational database, not a multidimensional database. That The OLAP object accessed by the generated SQL query is sent to a relational database management system not a multidimensional data source. And further asserting that querying of data from a multidimensional source that is stored within a relational database is not the same as a multidimensional query to a multidimensional database.

In response the examiner respectfully disagrees the limitation is not disclosed.

The claim states "using the relational-to-multidimensional mapping together with relational/multidimensional equivalency logic to construct a multidimensional database query based on the received relational database query, wherein", Greenfield discloses Col. 9 lines 10-15, one supporting method involves the use of SQL views which map a native relational schema model to a schema model that an OLAP API can understand. An OLAP API to relational database can recognize the views and hence the type and form of data returned. Thus, an OLAP API can generate an appropriate SQL statement for querying OLAP objects. Accordingly disclosing, using the relational-to-multidimensional mapping (map) together with relational/multidimensional equivalency logic (figure 2 element 202) to construct a multidimensional database query (querying OLAP objects) based on the received relational database query (can generate SQL statement). In regards to construction of a multidimensional query is not disclosed. This is respectfully disagreed as the query in Greenfield is for query of OLAP objects. While the query is an SQL statement, it is effectively a multidimensional query. Therefore, construction of a multidimensional query is disclosed.

In response to the assertion that the OLAP object is directed to a relational database not a multidimensional database. A relational database contain tables, one of ordinary skill in the art would know that tables comprise two dimensions, i.e. a row and column. Therefore, Applicant's assertion regarding multidimensional database is not persuasive.

The claim limitations are broad enough to be met, and therefore disclosed. The rejection is accordingly, maintained.

B. page 14-15, Applicant's assert that once the solved cube is registered with the RDBMS, access to data in the solved cube is purportedly accomplished using the RDBMS. That a user does not query the multidimensional data source directly. Further asserting the solved cubes in Greenfield are to avoid multidimensional queries, citing col. 4 lines 221-23. Asserting that when operations are performed on the solved cube they are not performed on the multidimensional data source from which the solved cube was generated. That when the RDBMS with the solved cube is queried, it is queried with relational SQL, not multidimensional database queries, citing Greenfield col. 9 lines 8-18. That therefore, Greenfield does not disclose the construction of a multidimensional database query, much less one based on a received relational database query.

In response, the examiner respectfully disagrees.

The claim states "using the relational-to-multidimensional mapping together with relational/multidimensional equivalency logic to construct a multidimensional database query based on the received relational database query, wherein", Greenfield discloses Col. 9 lines 10-15, one supporting method involves the use of SQL views which map a native relational schema model to a schema model that an OLAP API can understand. An OLAP API to relational database can recognize the views and hence the type and form of data returned. Thus, an OLAP API can generate an appropriate SQL statement for querying OLAP objects. Accordingly disclosing, using the relational-to-multidimensional mapping (map) together with relational/multidimensional equivalency logic (figure 2 element 202) to construct a multidimensional database query (querying OLAP objects) based on the received relational database query (can generate SQL statement). In regards to construction of a multidimensional query is not disclosed. This is respectfully disagreed as the query in Greenfield is for query of OLAP objects. While the query is an SQL statement, it is effectively a multidimensional query. Therefore, construction of a multidimensional query is disclosed.

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The claim limitations are broad enough to be met, and therefore disclosed. The rejection is accordingly, maintained.

C. Page 16-17, Applicant's assert that the "graphical user interface displays a presentation layer representation of the virtual relational table" is not disclosed because the virtual relational table is not disclosed. Stating that Cras's objects are not analogous to the claimed virtual relational table. That Cras's objects represent the available data at the data source, while the virtual relational table in Applicant's

application states that the virtual relational table comprised of a collection of rows and columns where columns are comprised of dimensions and rows are comprised of data filters, paragraph 0035 of the specification. That therefore Cras does not disclose virtual relational tables. And further, that the office action concedes that it does not teach "virtual relational tables".

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Greenfield was stated to disclose the virtual relational tables as seen in figure 2 element 212. Further described on col. 9 lines 44-45 and col. 11 lines 56-57. Cras discloses 0075 that a user manipulates graphical objects as presented to a user at a graphical user interface, where the objects represent the available data at the data source. Therefore the combination of the two disclose the asserted graphical user interface displays presentation layer representation of the virtual table. Greenfield discloses a system for performing operations on multidimensional data managed by a relational database system is facilitated by registration of solved cubes with a RDBMS. Cras discloses creating an analytical report on top of a multidimensional data model built on top of a relational or multidimensional database. In other words, it would have been obvious to a person of an ordinary skill in the art to have applied the disclosure of Cras to the disclosure of Greenfield since as stated in Cras, 0006, a most important feature of database management software is the user interface and report creating capability. Reports general format results in user friendly formats such as graphs, tables, crosstabs, or forms. Therefore, there is motivation provided in the Cras reference in order to illustrate and thereby apply a more efficient graphical user interface for the display of the virtual table information of Greenfield.

D. That there is no motivation or suggestion to combine Greenfield and Cras. That Greenfield does not consider what can be done with an analytical report, and that the report generation by Cras has no bearing to RDBMS access of solved cubes. That Cras's system there is no need for a translation system. That Thus Greenfield does not contribute to the presenting a RDBMS interface to multidimensional data would provide no benefit to the system of Cras.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Greenfield discloses a system for performing operations on multidimensional data managed by a relational database system is facilitated by registration of solved cubes with a RDBMS. Cras discloses creating an analytical report on top of a multidimensional data model built on top of a relational or multidimensional database. In other words, it would have been obvious to a person of an ordinary skill in the art to have applied the disclosure of Cras to the disclosure of Greenfield since as stated in Cras, 0006, a most important feature of database management software is the user interface and report creating capability. Reports general format results in user friendly formats such as graphs, tables, crosstabs, or forms. Therefore, there is motivation provided in the Cras reference in order to illustrate and thereby apply a more efficient graphical user interface for the display of the virtual table information of Greenfield.

E. pages 18-20. Assertions directed towards Hall in view of Cras. Applicant's assert that Hall does not disclose any teaching whatsoever regarding multidimensional data sources or the generation of multidimensional database queries, as such it's not applicable.

The examiner disagrees. Hall discloses data warehouse includes a database having data arranged in data tables, e.g. fact tables and reference tables. One of ordinary skill in the art would recognize that multidimensional sources are able to utilize fact tables and a plurality of dimension tables. Hall further discloses that the SQL queries are converted in order to utilize the most appropriate fact and reference tables. Furthermore, one of ordinary skill in the art would recognize that the use of fact tables and reference tables are directed to a schema for a multidimensional table. Therefore, Applicant's assertions directed towards a mere statement of Hall failing to disclose anything whatsoever regarding multidimensional data sources or generation of multidimensional queries is unpersuasive.